

# DVT - Deep Vein Thrombosis

## **DVT-AP ANATOMY AND PHYSIOLOGY**

**OUTCOME:** The patient/family will understand anatomy and physiology as it relates to deep vein thrombosis.

### **STANDARDS:**

1. Explain the normal anatomy and physiology of the venous system.
2. Discuss the changes to anatomy and physiology as a result of deep vein thrombosis.
3. Discuss the impact of these changes on the patient's health or well-being.

## **DVT-C COMPLICATIONS**

**OUTCOME:** The patient/family will have an understanding of the potential complications of DVT.

### **STANDARDS:**

1. Explain that the most common and important complication of DVT is pulmonary embolism, which can cause death.
2. Explain that the symptoms of a pulmonary embolism include shortness of breath, chest pain that may be worsened by deep breaths, and a cough that is productive and possibly flecked with blood.
3. Emphasize the importance of immediate medical intervention for signs and symptoms of pulmonary embolism.

## **DVT-DP DISEASE PROCESS**

**OUTCOME:** The patient/family will have an understanding of what DVT is and factors that are associated with increased risk of DVT.

### **STANDARDS:**

1. Explain that a DVT occurs when a blood clot partially or totally blocks the flow of blood in a deep vein. A DVT usually occurs in the leg, but may also occur in the arm or pelvis. This blood clot can result from injury to the vein or if the flow of blood slows down or stops.
2. Review the factors related to the development of DVT: age over 40, obesity, history of DVT, immobility, major injury, major surgery lasting over 30 minutes, surgery involving the leg joints or pelvis, cancer or some of its treatments, long-

distance travel, pregnancy and childbirth, contraceptives or hormone replacement therapy, circulation problems, smoking, hereditary coagulation disorders.

3. Explain that the main signs and symptoms of DVT are leg pain that is worse when standing or walking, leg swelling, warmth and redness of the leg. Explain that only a physician, through test interpretation, is able to diagnose a DVT.

#### **DVT-FU FOLLOW-UP**

**OUTCOME:** The patient/family will understand the importance of adhering to the treatment of deep vein thrombosis.

#### **STANDARDS:**

1. Discuss the importance of follow-up care.
2. Discuss the procedure for obtaining follow-up appointments and that follow-up appointments should be kept.
3. Emphasize that full participation in the treatment plan is the responsibility of the patient/family.
4. Discuss signs/symptoms that should prompt immediate follow-up, e.g., shortness of breath, chest pain or pain, redness or swelling of the limb.
5. Discuss the availability of community resources and support services and refer as appropriate.

#### **DVT-L LITERATURE**

**OUTCOME:** The patient/family will receive literature about DVT.

#### **STANDARDS:**

1. Provide the patient/family with literature on DVT.
2. Discuss the content of the literature.

#### **DVT-M MEDICATIONS**

**OUTCOME:** The patient/family will understand the purpose, proper use, duration, and expected outcomes of their drug therapy.

#### **STANDARDS:**

1. Describe the name, strength, purpose, dosing directions, duration and storage of the medication. Anticoagulants do not dissolve the clot, but can stop new blood clots from forming and old ones from growing.
2. Discuss the risks, benefits and common or important side effects of the medication and follow up as appropriate.

- a. Discuss that some anticoagulants can cause birth defects. Emphasize the importance of contraception. Discuss the importance of consulting a physician if breastfeeding.
- b. Emphasize that the patient should avoid activities that could increase the risk of injury while taking anticoagulants.
3. Discuss any significant drug/drug or drug/food interactions, including interaction with alcohol. **Refer to ACC (anticoagulation).**
4. Discuss the importance of keeping a list of all current prescriptions and over-the-counter medicines, vitamins, herbs, traditional remedies, and supplements. Encourage the patient to bring this list and pill bottles to appointments for medication reconciliation.

## **DVT-MNT MEDICAL NUTRITION THERAPY**

**OUTCOME:** The patient/family will understand the specific nutritional intervention(s) needed for treatment or management of DVT.

### **STANDARDS:**

1. Explain that Medical Nutrition Therapy (MNT) is a systematic nutrition care process provided by a Registered Dietitian (RD) that consists of the following:
  - a. Assessment of the nutrition related condition.
  - b. Identification of the patient's nutritional problem.
  - c. Identification of a specific nutrition intervention therapy plan.
  - d. Evaluation of the patient's nutritional care outcomes.
  - e. Reassessment as needed.
2. Review the basic nutrition recommendations for the treatment plan.
3. Discuss the benefits of nutrition and exercise to health and well-being.
4. Assist the patient/family in developing an appropriate nutrition care plan.
5. Refer to other providers or community resources as needed.

## **DVT-N NUTRITION**

**OUTCOMES:** The patient/family will understand the effect of various foods in relation to anticoagulation therapy.

### **STANDARDS:**

1. Explain the importance of a consistent diet while receiving anticoagulation therapy.

2. Explain how various foods containing vitamin K may interact with the patient's medication to alter coagulation.
3. Explain how certain herbal therapies including large doses of vitamin E may alter the results of laboratory tests.
4. Refer to a registered dietitian for MNT as appropriate.

## **DVT-P      PREVENTION**

**OUTCOME:** The patient/family will understand the factors associated with an increased risk of DVT and how to lower the risk of DVT.

### **STANDARDS:**

1. Explain that surgery and some medical treatments can increase the risk of DVT.
2. Explain the role of anticoagulants, compression stockings and intermittent compression pumps in preventing DVT during hospitalization.
3. Explain general measures to prevent DVT:
  - a. Exercise legs regularly.
  - b. Maintain a healthy weight.
  - c. Avoid sitting or lying in bed for long periods of time without moving the legs.
  - d. Women, particularly those over 35, consider the risks and benefits of taking oral contraceptives or hormone replacement therapy.
  - e. Tobacco use/exposure may increase the risk of DVT.
4. Explain general measures to prevent DVT while traveling:
  - a. If one or more risk factors are present, seek medical advice before traveling.
  - b. Exercise legs at least once every hour.
  - c. As appropriate, take an aspirin before traveling four hours or more.
  - d. Don't take sedatives.
  - e. Wear loose-fitting, comfortable clothing.
  - f. Keep legs uncrossed.
  - g. Maintain hydration and avoid alcohol.
  - h. Wear graduated compression stockings, as appropriate.

## **DVT-TE      TESTS**

**OUTCOME:** The patient/family will understand the test(s) to be performed, the potential risks, the expected benefits, and the risks of non-testing.

**STANDARDS:**

1. Explain test(s) that have been ordered (explain as appropriate):
  - a. method of testing
  - b. necessity, benefits, and risks of test(s) to be performed
  - c. any potential risk of refusal of recommended test(s)
  - d. any advance preparation and instructions required for the test(s)
  - e. how the results will be used for future medical decision-making
  - f. how to obtain the results of the test
2. Explain test results:
  - a. meaning of the test results
  - b. follow-up tests may be ordered based on the results
  - c. how results will impact or effect the treatment plan
  - d. recommendations based on the test results

**DVT-TX      TREATMENT**

**OUTCOME:** The patient/family will understand the treatment options that may be used to treat deep vein thrombosis.

**STANDARDS:**

1. Explain that the treatment plan will be made by the patient and medical team after reviewing available options.
2. Discuss the treatment plan, including lifestyle adaptation, pharmacologic, surgical, and psychosocial aspects of the treatment plan.
3. Discuss the importance of fully participating in the treatment plan, including scheduled follow-up.